

# Kreatech™ FISH probes

## Product Information Sheet

KI-10753

RET (10q11) Break

100 µl

**DANGER**



**FORMAMIDE**



2°C

8°C



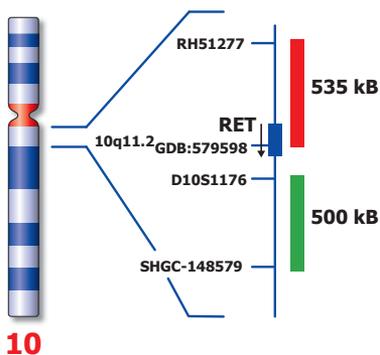
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**RUO - Research Use Only**

Not for use in diagnostic procedures

PI-KI-10753\_D2.1

Published Oct 2015



Not to scale

KI-10753

## Kreatech™ RET (10q11) Break FISH probe

**Introduction:** The **RET (10q11) Break FISH** probe is optimized to detect translocations involving the RET gene region at the 10q11 locus in a dual-color assay on formalin-fixed paraffin-embedded tissue samples.

**Critical region 1 (red):** The **proximal RET (10q11)** gene region is direct-labeled with PlatinumBright™550.  
**Critical region 2 (green):** The **distal RET (10q11)** gene region is direct-labeled with PlatinumBright™495.

**Reagent:** Kreatech probes are direct-labeled DNA probes provided in a ready-to-use format. Apply 10 µl of probe to a sample area of approximately 22 x 22 mm.

**Please refer to the Instructions for Use for the entire Kreatech FISH protocol.**

**Kreatech FISH probes are REPEAT-FREE™ and therefore do not contain Cot-1 DNA. Hybridization efficiency is increased and background, due to unspecific binding, is highly reduced.**

**Pattern:** The **RET (10q11) Break FISH** probe is designed as a dual color probe to detect rearranged chromosomes 10. A split or break is defined as a green/red or yellow fusion signals (F) splitting into separate red (R) and green (G) signals. Only signals which are more than one signal diameter apart from each other are counted as a break. Two co-localized green/red or yellow fusion signals identify the normal chromosome(s) 10.

	Normal Signal Pattern	RET translocation
Expected Signals	2F	1F1R1G*

**\*) Note:** Some of the currently known fusion partners are located relatively close to the RET gene. For instance, the pericentric inversion inv(10)(p11;q11) described in lung adenocarcinomas will result in a distance of ~11 Mb, while inversions involving RET and NCOA4, and RET and CCDC6 will result in distances of ~8 MB and ~20 MB, respectively. As a result, the separate R and G signals may be located less than one signal diameter apart, possibly resulting in increased numbers of false negatives. Therefore, it is recommended to carefully define cut-off specifications in your setting.

Signal patterns other than those described above may indicate variant translocations, deletions or amplifications on der(10) or other complex rearrangements. Investigators are advised to analyze metaphase cells for the interpretation of atypical signal patterns.

**References:** Chen et al., Cancer Genet Cytogenet, 2007, 178: 128-134  
Kohno et al., Nat Med, 2012, 18: 375-377  
Takeuchi et al., Nat Med, 2012, 18: 378-381

**Warning and precautions:** In case of emergencies check SDS sheets for medical advice. SDS sheets may be obtained by either contacting Leica Technical Support or visiting [www.LeicaBiosystems.com](http://www.LeicaBiosystems.com). DNA probes contain formamide which is a teratogen; do not inhale or allow skin contact. Wear gloves and a lab coat when handling DNA probes. All materials should be disposed of according to your institution's guidelines for hospital waste disposal.

**Reagent Storage and Handling:** Store at 2-8 °C. Reagents should not be used after the expiration date on the vial label.

**TECHNICAL SUPPORT** Technical support is available at [www.LeicaBiosystems.com/service-support/technical-support/](http://www.LeicaBiosystems.com/service-support/technical-support/) or toll free at 800-248-0123 or via e-mail: [kreatech-support@leicabiosystems.com](mailto:kreatech-support@leicabiosystems.com).

**CUSTOMER SERVICE** Kreatech probes may be ordered through Leica Customer Service toll free at 800-248-0123 or order via e-mail: [purchase.orders@leica-microsystems.com](mailto:purchase.orders@leica-microsystems.com).